

REMARKS

Claim 3 and 27 and dependent claims

Claims 2, 3, 7,-11, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli, U.S. Patent 5,317,170, in view of Duveneck et al., U.S. Patent 6,469,785 (hereinafter "Duveneck"). Applicants respectfully traverse the rejection. Claims 3 and 27 are amended to recite that the "surface is one of an alloy comprising $(Al_xGa_{1-x})_yIn_{1-y}P$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy." Applicants can find no such teaching in either Paoli or Duveneck. Claims 2 and 7-11 depend from claim 3 and are therefore allowable for at least the same reason. Claims 28-30 depend from claim 27 and are therefore allowable for at least the same reason.

Claims 3, 10, and 27 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagase et al., U.S. Patent 5,528,057 (hereinafter "Yanagase"), in view of Calveley, U.S. Patent 6,165,911. Applicants can find no teaching of the above-quoted element of claims 3 and 27 in either Yanagase or Calveley.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli, in view of Duveneck and further in view of Kish et al., U.S. Patent 5,376,580. Claim 4 depends from claim 3. Kish is cited only to teach "forming is executed concurrently with a wafer-bonding process" and as such adds nothing to the deficiencies of Paoli and Duveneck with respect to claim 3. Claim 4 is thus allowable over Paoli, Duveneck, and Kish et al. for at least the same reason claim 3 is allowable over Paoli and Duveneck.

Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli, in view of Duveneck, further in view of Calveley and further in view of Fogarty, U.S. Patent 5,141,677. Claims 31-33 depend from claim 27. Fogarty is cited as teaching "said stamping is executed at an elevated temperature," and as such adds nothing to the deficiencies of Paoli

and Duveneck with respect to claim 27, as described above. Claims 31-33 are thus allowable over the combination of Paoli, Duveneck, Calveley, and Fogarty for at least the same reason claim 27 is allowable over Paoli and Duveneck.

Claim 5

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli in view of Duveneck. Applicants respectfully traverse the rejection. Claim 5 is amended to recite the formed “surface is one of an alloy comprising $(Al_xGa_{1-x})_yIn_{1-y}P$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy.” Applicants can find no such teaching in either Paoli or Duveneck.

Claim 12 and dependent claims

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagase in view of Jiang et al., U.S. Patent 5,966,399 (hereinafter “Jiang”). Applicants respectfully traverse the rejection.

Claim 12 recites “a first optical element stamped on at least one surface of said semiconductor light emitter . . . wherein the stamped surface is one of an alloy comprising $(Al_xGa_{1-x})_yIn_{1-y}P$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy.” Applicants have found no such teaching in either Yanagase or Jiang. The Examiner correctly notes that Yanagase does not teach that the stamped surface is “ $(Al_xGa_{1-x})_yIn_{1-y}P$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ ” or “a III-nitride alloy.” The Examiner cites Jiang as teaching the above-quoted materials at column 2 lines 33-39 and column 7, lines 20-29. The Examiner is misrepresenting the teachings of Jiang. In both portions of Jiang cited by the Examiner, the only nitride material Applicants can find is SiN. Since Si is in column IV of the periodic table, not column III, SiN is not a III-nitride alloy. Applicants can find no mention in Jiang

of stamping “ $(\text{Al}_x\text{Ga}_{1-x})_y\text{In}_{1-y}\text{P}$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ ” or “a III-nitride alloy.”

Accordingly, Claim 12 is allowable over the combination of Yanagase and Jiang.

Claims 13, 23, and 24 depend from claim 12 and are therefore allowable for at least the same reasons as claim 12.

Claim 34

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli, in view of Duveneck and further in view of Jiang. Applicants respectfully traverse the rejection.

Claim 34 recites “at least one optical element stamped on at least one surface of said semiconductor light emitter . . . wherein the stamped surface is one of an alloy comprising $(\text{Al}_x\text{Ga}_{1-x})_y\text{In}_{1-y}\text{P}$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy.”

The Examiner states “the combination of Paoli in view of Duveneck et al does not further teach that the stamped surface is one of an alloy comprising $(\text{Al}_x\text{Ga}_{1-x})_y\text{In}_{1-y}\text{P}$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy.” Jiang is cited as teaching the above-quoted element of claim 34. As described above in the section titled “Claim 12 and dependent claims,” Applicants can find no mention in Jiang of stamping “ $(\text{Al}_x\text{Ga}_{1-x})_y\text{In}_{1-y}\text{P}$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ ” or “a III-nitride alloy.” Claim 34 is thus allowable over the combination of Paoli, Duveneck, and Jiang.

Claims 41 and 42

Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli in view of Duveneck and further in view of Jiang. Applicants respectfully traverse the rejection.

Claims 41 and 42 recite a Fresnel lens, a holographic diffuser, or optical element “stamped on a surface of said semiconductor light emitter; wherein the stamped surface is one of an alloy comprising $(Al_xGa_{1-x})_yIn_{1-y}P$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy.” Claims 41 and 42 are allowable over the combination of Paoli, Duveneck, and Jiang because Applicants can find no teaching any of these references that the stamped surface may be $(Al_xGa_{1-x})_yIn_{1-y}P$ or III-nitride, as described above in reference to claim 34.

Claims 43 and 44

Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli, Duveneck, and Jiang in view of Tomomura et al., U.S. Patent 4,988,579 (hereinafter “Tomomura”). Applicants respectfully traverse the rejection.

Claims 43 and 44 each recite “wherein the stamped surface is one of an alloy comprising $(Al_xGa_{1-x})_yIn_{1-y}P$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy.” Applicants have found no teaching of the quoted element in any of Paoli, Duveneck, Jiang, and Tomomura. Claims 43 and 44 are therefore allowable over any combination of Paoli, Duveneck, Jiang, and Tomomura.

Claims 45, 52 and dependent claims

Claims 45, 46, 47, 51, and 52 are rejected under 103(a) as being unpatentable over Duveneck in view of Spaeth et al., U.S. Patent 5,875,205 (hereinafter “Spaeth”). Applicants respectfully traverse the rejection. The Examiner cites Duveneck as teaching “a method for forming a light emitting device . . . comprising forming an optical element (346, 348) in a material, and bonding said material to a semiconductor light emitter as described in column 13, lines 21-39 and column 14, lines 5-11.” Spaeth is cited as teaching particular optical element materials. Claims 45 and 52 are amended to recite “the bond being formed at an

interface between the material and a surface of the semiconductor light emitter from which light exits the emitter.” Applicants can find no such teaching in Duveneck or Spaeth. Claims 45 and 52 are thus allowable over Duveneck and Spaeth. Claims 46, 47, and 51 depend from claim 45 and are therefore allowable for at least the same reason.

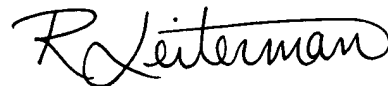
Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duveneck in view of Spaeth and further in view of Gaudiana et al. U.S. Patent 5,132,430. Claim 50 depends from claim 45. Gaudiana et al. is cited as teaching particular bonding materials and as such adds nothing to the deficiencies of Duveneck and Spaeth with respect to claim 45. Claim 50 is thus allowable over Duveneck, Spaeth, and Gaudiana et al. for at least the same reason that claim 45 is allowable over Duveneck and Spaeth.

In view of the above arguments, Applicants respectfully request allowance of all pending claims. Should the Examiner have any questions, the Examiner is invited to call the undersigned at (408) 382-0480.

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Respectfully submitted,



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